

In re: Rankin, Sr.
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REMARKS

The foregoing amendments and these remarks are responsive to the Office Action of December 19, 2002. Favorable reconsideration and allowance of the present application is respectfully requested in view of the foregoing amendments and these remarks.

The Office Action begins by indicating that Claims 12-15 have been withdrawn from consideration as being directed to a nonelected invention. Accordingly, Claims 12-15 have been cancelled.

By way of the foregoing amendments, and in response to requests made by the Office Action, a new title and Abstract have been provided by way of the foregoing amendments. It is submitted that the new title and Abstract satisfy the applicable requirements.

The Office Action rejects the claims as being indefinite, due to recitations in Claims 4 and 6. Claims 4 and 6 have been amended by way of the foregoing amendments, for purposes of clarification rather than to further narrow the scope of the claims, so that the indefiniteness rejections have been overcome.

Claims 1-11 are rejected as being obvious over U.S. 5,957,755 to LaFlamme taken alone or in view of U.S. 5,024,563 to Randall. Applicant respectfully disagrees with all aspects of these rejections, and respectfully submits that the Office Action fails to provide prima facie rejections, such that the rejections should be withdrawn.

In support of the obviousness rejection, the Office Action indicates that "LaFlamme discloses a method of manufacturing an insert by applying a thin film coating to the surface of a coating insert wherein the coating can be titanium aluminum nitride and/or tungsten carbide . . . (col. 1 lines 43-55)." It is respectfully submitted that the Office Action has overstated the teachings of the LaFlamme patent because, with respect to titanium aluminum nitride and tungsten carbide, LaFlamme merely indicates that:

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Inserts can be manufactured in various ways. The most common base materials are tungsten carbide . . . combined with a metallic binder such as cobalt. (Col. 1, lines 44-47). Various thin film coatings can be applied to the surface of the cutting insert. Examples of common thin film coatings are . . . titanium aluminum nitride . . . (Col. 1, lines 48-52).

It is submitted that, in contrast to what is indicated by the Office Action, those of ordinary skill in the art will understand that the above-quoted portions of LaFlamme merely teach that an uncoated insert can be formed from a mixture of tungsten carbide and cobalt, and that the uncoated insert can be coated with titanium aluminum nitride to form a coated insert. Accordingly, LaFlamme fails to teach or suggest numerous aspects of Claim 1. For example, Claim 1 is reproduced below, with emphasis added.

A method for providing and using a cutting tool to cut a plurality of first workpieces, with each first workpiece being wood or including a substantial amount of wood, to produce a plurality of second workpieces from the first workpieces, the method comprising:

applying via a vacuum procedure a coating to at least a portion of the cutting tool that includes a cutting edge of the cutting tool, the coating including an inner hard layer and an outer friction-reducing layer over the hard layer, whereby a coated cutting tool is formed, and wherein the hard layer is harder than the friction-reducing layer and the friction-reducing layer has a lower coefficient of friction than the hard layer; and

then cutting the first workpieces, which are wood or include a substantial amount of wood, with the cutting edge of the coated cutting tool to produce the second workpieces.

As should be apparent from the foregoing, LaFlamme fails to teach or suggest recitations of Claim 1, such as the recitation of "applying via a vacuum procedure a coating . . . including an inner hard layer and an outer friction-reducing layer over the hard layer, . . . wherein the hard layer is harder than the friction-reducing layer and the friction-reducing layer has a lower coefficient of friction than the hard layer . . ." Indeed, LaFlamme does not even teach or suggest a coating with layers, as recited by Claim 1. That is, and in considerable contrast to Claim 1, the portion of LaFlamme that is referred to by the Office Action merely teaches: (1) that the insert (which is a type of cutting tool) is formed from a mixture of tungsten carbide and cobalt such

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that LaFlamme's mixture of tungsten carbide and cobalt are not a layer of a coating that is applied via a vacuum procedure to a cutting tool, and (2) that the uncoated insert can be coated with titanium aluminum nitride to form an insert with only one layer / one type of coating material. Accordingly, LaFlamme fails to teach or suggest numerous aspects of Claim 1.

It is submitted that the Randall patent does not overcome the deficiencies in the teachings of LaFlamme. For example, Randall does not teach or suggest coating a cutting tip, much less a coating with discrete layers, as recited by Claim 1. Accordingly, it is respectfully submitted that the rejection of Claim 1 should be withdrawn because even if it were obvious to combine the teachings of LaFlamme and Randall, which is not conceded, combining the teachings of LaFlamme and Randall cannot provide Claim 1.

Claim 1 and new Claim 16 are the only pending independent claims, and it is respectfully submitted that Claim 16 is allowable for at least many of the same reasons as Claim 1. In view of the foregoing, it should be readily apparent that each of the independent claims 1 and 16 are in condition for allowance. Likewise, the dependent claims 2-11 and 17-24 should be allowable due to their dependence from an allowable independent claim, and because the dependent claims further patentably distinguish the present invention. In this regard, a few examples of how the Office Action fails to present prima facie rejections of the dependent claims follow.

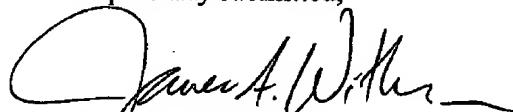
Both LaFlamme and Randall fail to teach or suggest the cryogenically treating recited by claims 3, 5, 7, 9 and 11. Both LaFlamme and Randall fail to teach or suggest the recitation in Claim 4 that applying the coating includes "adhering titanium aluminum nitride to the cutting tool . . . and . . . adhering tungsten carbide with carbon over the hard layer." Claim 8 recites that "the cutting edge of the cutting tool is steel, so that the coating includes coating the steel cutting edge." LaFlamme does not teach or suggest this recitation of Claim 8, and it is submitted that Randall does not overcome this deficiency in LaFlamme. The Examiner's attention is also directed to other of the originally filed dependent claims, and also to new dependent Claims 17-24.

In view of the foregoing, it is respectfully submitted that the present application is in condition for allowance, and such action is solicited. If for some reason the Examiner deems that

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this application is not in condition for immediate allowance, it is requested that the telephone the undersigned at 704-444-1184 in an effort to expedite prosecution.

Respectfully submitted,



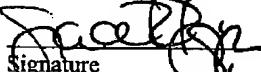
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Version with Markings to Show Changes Made:

In The Title:

The title has been rewritten as follows:

METHODS [AND APPARATUS] FOR CUTTING ARTICLES CONTAINING AT LEAST A SUBSTANTIAL AMOUNT OF WOOD

In The Abstract:

The Abstract has been rewritten as follows:

A conventional cutting tool is [coated with a predetermined coating : nd thereafter optionally cryogenically treated, so that the operational characteristics of the cutting tool are advantageously enhanced with respect to its use for cutting a workpiece that is wood or includes a substantial amount of wood.] provided and a cutting edge of that tool is formed and/or sharpened. A relatively hard layer is applied over at least a portion of the cutting tool that includes the cutting edge, and then a friction-reducing layer is applied over the hard layer. The entire coated cutting tool, or at least a portion of the coated cutting tool that includes the cutting edge, is cryogenically treated. The coated and cryogenically treated cutting tool is mounted in a conventional manner to a conventional cutting machine, and then used cut articles containing at least a substantial amount of wood.

In The Claims:

Claims 4 and 6 have been rewritten as follows:

4. (Amended) The method of claim 1, wherein the applying the coating includes:

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adhering the hard layer to the cutting tool, with the adhering the hard layer to the cutting tool including [includes] adhering titanium aluminum nitride to the cutting tool; and
adhering the friction-reducing layer over the hard layer, with the adhering the friction-reducing layer [includes] including adhering tungsten carbide with carbon over the hard layer.

6. (Amended) The method of claim 1, wherein the cutting the first workpieces with the cutting edge of the coated cutting tool to produce the second workpieces includes cutting the first workpieces serially [and in rapid succession].

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